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**IN THE CLAIMS:***Please amend the claims as follows:*

1. (Cancelled)

2. (Previously Presented) A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back control OAM PDU requesting the termination of the loopback process to the remote device, wherein the predetermined field includes one of:

a first field value representing a message requesting an initiation of a loop-back process;

a second field value representing a message acknowledging the initiation request message of

the loop-back process;

a third field value representing a message requesting a termination of the loop-back process from the local device to the remote device;

a fourth field value representing a message requesting a termination of the loop-back process from the remote device to the local device; and

a fifth field value representing a message acknowledging the fourth field value from the local device to the remote device.

3. (Cancelled)

4. (Previously Presented) A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control

OAM PDU requesting the initiation of the loop-back process to the remote device; and  
a loopback process termination step of transmitting, by the local device, a loop-back control  
OAM PDU requesting the termination of the loopback process to the remote device,  
wherein the loop-back process termination step further includes:  
transmitting, by the local device, the loop-back control OAM PDU acknowledging the  
termination of the loop-back process to the remote device.

5. (Previously Presented) A method of controlling a loop-back process between a local  
device and a remote device in an Ethernet passive optical network, the method comprising the steps  
of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation,  
administration, and maintenance - packet data unit), the predetermined field having distinguishing  
messages for an initiation of the loop-back process and a termination of the loop-back process; and  
(b) the local device and the remote device performing the loop-back process, which includes  
an initiation of the loop-back process and a termination of the loop-back process, using the loop-back  
control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into  
which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control  
OAM PDU requesting the initiation of the loop-back process to the remote device; and  
a loopback process termination step of transmitting, by the local device, a loop-back control  
OAM PDU requesting the termination of the loopback process to the remote device,

wherein the loop-back process termination step includes the steps of:

sensing, by the remote device, a termination of a predetermined time of the loop-back process;

transmitting, by the remote device, a loop-back control OAM PDU requesting the termination of the loop-back process to the local device; and

transmitting, by the local device, a loop-back control OAM PDU acknowledging the termination of the loop-back process to the remote device.